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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/604,848   | 08/21/2003  | Gert-Ove WAHLSTROM   | 07589.0127.PCUS00   | 1847             |
| 28694  | 7590        | 04/22/2004           | EXAMINER            |                  |
| TRACY W. DRUCE, ESQ.<br>1496 EVANS FARM DR<br>MCLEAN, VA 22101 |             |                      | SAN MARTIN, EDGARDO |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2837                |                  |

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |  |                     |  |
|------------------------------|------------------------|--|---------------------|--|
| <b>Office Action Summary</b> | <b>Applicati n No.</b> |  | <b>Applicant(s)</b> |  |
|                              | 10/604,848             |  | WAHLSTROM ET AL.    |  |
|                              | <b>Examin r</b>        |  | <b>Art Unit</b>     |  |
|                              | Edgardo San Martin     |  | 2837                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with th correspondence address --**

**Peri d f r Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/21/03;8/22/03</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "the pipe portion designed as a venturi" in line 1. There is insufficient antecedent basis for this limitation in the claim. Claim 4 should be dependent upon claim 3 instead of claim 2.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 - 3 and 9 – 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Fuhrmann (FR 2 751 375).

With respect to claims 1 and 9 - 11, Fuhrmann teaches an apparatus for damping resonance in a conduit (Fig.2, Item 1) for transporting exhaust gases from an internal combustion engine, which conduit is provided with at least one perforation (Fig.2, Item 2) located at a distance from the outlet end (Fig.2, Item 3) of the conduit and at a point

(Fig.2, Item 4') in the conduit with a comparatively lower static pressure than downstream therefrom, the perforation forming an acoustic connection between the interior of the conduit and the surrounding atmosphere. The Examiner considers that the subject matter described by claims 9 – 11 is inherent by the structure described in claim 1, it is just the description of how the structure of claim 1 works.

With respect to claims 2 and 3, Fuhrmann teaches wherein the lower static pressure in the vicinity of the perforation is brought about by means of a reduction in the cross section of the conduit (Fig.2, Item 4'); and wherein the reduction in the cross section of the conduit is designed as a venturi (Fig.2).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuhrmann (FR 2 751 375) in view of Okawa et al. (JP 02173313 A), and further in view of Ciapetta et al. (US 3,471,265).

Fuhrmann teaches the limitations discussed in a previous rejection, but fails to disclose wherein the pipe portion designed as a venturi is covered on the outside with a sound-absorbing material; and wherein the sound-absorbing material is covered by a perforated plate.

On the other hand, Okawa et al. teach a pipe portion (Fig.3, Item 2) designed as a venturi being covered on the outside with a sound-absorbing material (Fig.3, Item 3) (Abstract).

Ciapetta et al. teach a pipe portion designed as a venturi (Fig.3) being covered on the outside with a catalytic material (Fig.3, Item 58) covered by a perforated plate (Fig.3, Item 60).

It would have been obvious to a person with ordinary skill in the art at the time of the invention was made to modify the Fuhrmann design by employing the Okawa et al. sound absorbing material and the Ciapetta et al. perforated cover plate because the sound absorbing material would help increase the sound absorbing characteristics and performance of the system, and the perforated cover plate would help maintain the sound absorbing material in place in addition to supply the Fuhrmann perforations with the required contact with the surrounding atmosphere, in order to properly work.

4. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuhrmann (FR 2 751 375) in view of Cheng (US 5,197,509).

Fuhrmann teaches the limitations discussed in a previous rejection, but fails to disclose wherein the lower static pressure in the vicinity of the perforation is brought about by means of a change in direction of the gas flow in the conduit, and wherein the change in direction of the gas flow is brought about by means of a curve of the conduit.

Nevertheless, Cheng teaches a lower static pressure being brought about by means of a change in direction of the gas flow in a conduit, and wherein the change in

direction of the gas flow is brought about by means of a curve of the conduit (Fig.2A; Col.3, Line 32 – Col.4, Line 15).

It would have been obvious to a person with ordinary skill in the art at the time of the invention was made to modify the Fuhrmann design by providing a curve in the conduit as disclose by Cheng because the curve would create a change in direction of the gas flow, in addition to create an area of static low pressure as explained by Cheng.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuhrmann (FR 2 751 375).

Fuhrmann teaches the limitations discussed in the previous rejections, but fails to disclose wherein the perforations are covered by means of a sound-permeable fabric on the inside or outside of the conduit.

The current application establishes on ¶ [0016] that *"In this connection, the flow rate will increase within this portion with a commensurate reduction in static pressure in the pipe as a consequence. As a result, surrounding air can be sucked into the pipe through the perforations without exhaust gases escaping."*, and on ¶ [0017] that *"The reduced pressure will draw air in from the surrounding environment of the pipe via the perforation 14."* The Examiner concludes by these statements that there is no critical need for a fabric covering.

It would have been an obvious matter of design choice to employ a sound permeable fabric covering, since applicant has not disclosed that the sound permeable fabric covering solves any stated critical problem and it appears that the invention would perform equally well with or without the sound permeable fabric covering.

***Conclusion***

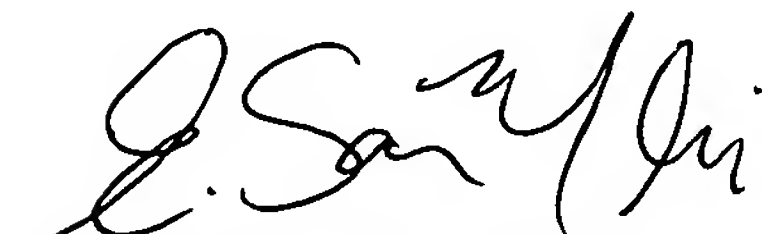
6. The attached hereto PTO Form 892 lists prior art made of record and not relied upon, the Examiner considered it pertinent to applicant's disclosure.

***Contact Information***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edgardo San Martin whose telephone number is (571) 272-2074. The examiner can normally be reached on 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Edgardo San Martín  
Patent Examiner  
Art Unit 2837  
Class 181  
April 17, 2004